NOTES FROM MYCOLOGICAL LITERATURE XVI.

W. A. KELLERMAN.

MYCOLOGICAL NOTES, C. G. LLOYD, No. 20:221-244, Pl. 55-69, June 1905, treats of the Lycoperdons of the United States. Only a brief discussion of characters is given, supplementary to the outline for the European species. The spores can be divided into two classes, (1) the *large rough* spores 6-8 mic., and (2) the small or medium (4-5 mic.) smooth or slightly rough spores. The three important papers noted are those of Peck, Trelease and Morgan. Mr. Lloyd makes the following sections, for the American species, namely: Atropurpureum, Gemmatum, Pratense, Polymorphum, and Spadiceum sections. Full notes and comments relative to the various species are given, and in each case a list of localities for the specimens in Mr. Lloyd's collection. Thirty-five species of Lyncoperdons are included.

PROF. E. W. D. HOLWAY HAS BEGUN THE PUBLICATION of a spendid monograph of the North American Uredineae. Vol. I, Part I, issued April 15, 1905, contains the Pucciniae of Ranunculaceae, Berberidaceae, Papaveraceae, Bromeliaceae, Commelinaceae, Juncaceae, Liliaceae, Amaryllidaceae, Iridaceae, and Orchidaceae. The design of the work as stated: "is to furnish such descriptions and photomicrographs as will enable anyone to determine" the species of Uredineae. The descriptions are all drawn from specimens in the herbarium of the University of Minnesota. Complete synonomy is given and exsiccati cited. The photographs are all magnified two hundred diameters. The large page, $8\frac{1}{2}$ x 11, 10-pt. type, good paper, admirable photographs of all the species, commend this work in the highest degree. At least for Uredineae we are now promised literature not inferior to that prevalent in Germany.

C. G. LLOYD'S MYCOLOGICAL NOTES No. 18:189-204, Pl. 17-24, July, 1904, is devoted mainly to: (285) The Genus Trichaster, (286) Lanophila bi-color, 287) Lasiosphaeria fenzlii, (288) The genus Schizostoma and (289) Broomeia congregata.

CHARLES HORTON PECK PUBLISHES NEW SPECIES OF FUNGI in Bull. Torr. Bot. Club, 32:77-81, February 1905. They are the following: Lepiota maculans, Mycena denticulata, Pleurotus umbonatus, Lactarius sumstinei, Marasmius sutliffae, Panus merulii-ceps, Flammula multifolia, Cortinarius braendlei, Cortinarius morrisii, Stropharia schraderi, Psathyra multipedata, and Geopyxis nebulosoides.

C. G. LLOYD'S MYCOLOGICAL NOTES No. 19, May 1905, is devoted to the Genus Lycoperdon in Europe — with some additional

notes, as Caulogossum transversarium, Queletia miribilis, Rev. G. Bresadola, Principles of Priority, Stations for Anthurus borealis, and Simblum rubescens. The characters of Lycoperdon are outlined, the history sketched and the following sections of the genus made: Atropurpureum, Gemmatum, Pratense, and Spadiceum. Of the half-tones, Plate No. 40 shows Cauloglossum transversarium; 41-54 exhibit Lycoperdons partly from American but mostly from European specimens.

JOSEPH CHARLES ARTHUR TREATS OF THE AMPHISPORES OF THE GRASS AND SEDGE RUSTS in the January No. of the Bulletin of the Torrey Botanical Club, 1905, pp. 35-41. Following a general sketch of the characters of amphispores an account is given, with text figures, of the following arid-region species that exhibit such spores: Puccinia vexans Farl. (*Uromyces brandagei* Pk.); Puccinia tripsaci D. & H. (*Uredo pallida* D. &. H.); Puccinia stipae Arth. (*Uredo eriomae* Ell., *U. luxurians* E. & E., *Puccinia substerilis* E. & E., *P. micrantha* Griff.); Puccinia tosta (*Uromyces scaber* E. & E.); Puccinia cryptandri Ell. & Barth. (*Uromyces simulans* Pk.); Uromyces rottboelliae Arth.; Puccinia caricis strictae Diet. (*Uromyces caricis* Pk.); and Puccinia atrofusca (D. & T.) Holw. (*Uromyces atrofuscus* Dudl. & Thomps.). Dr. Arthur also describes as new the following: Puccinia (?) garrettii, which is remarkable as exhibiting sori which resemble teleutosori but contain only amphispores. "Not a single teleutospore could be found and the species is referred to the genus *Puccinia* on the ground that most *Carex* rusts belong to it. . . . . They [the spores] are clearly entitled to recognition as a distinct sort of spore."

IN BULLETIN DE L'HERBIER BOISSIER TOME V, 1905, 31 May 1905, there is published an article of ten pages entitled Encore La Schlamydomyxa par E. Penard; also one on Lichenes a cl. Damazio in Brasilia lecti, Auctore A. Zahlbruckner.

BEITRAEGE ZUR BIOLOGIE DER UREDINEEN (Phragmidium subcorticum [Schrank] Winter, Puccinia caricis montanae Ed Fischer) is an Inaugural-Dissertation zur Enlangung der Doktorwürde von Walter Bandi; pp. 1-36. Druck von C. Heinrich, Dresden, 1903.

THE FOLLOWING MYCOLIGICAL ARTICLES were published in 1904 in the Bulletin de l'Académie internationale de Géographie bontanique (ancien Monde des Plantes) [Tome XIII]: Contribution a la Flore mycologique de l'Auvergne, M. L. Brevière; Liste des Champignons supérieure de la Vienne, M. J. Poirault.

TERMS APPLIED TO THE SURFACE AND SURFACE APPENDAGES OF FUNGI by William A. Murrill, published in the April No. of Torreya (1905) is an excellent glossary of mycological terms. A good feature of the paper is found in the fact that after the alphabetical

list of the words defined, there is a Synopsis of the terms under the subheads of General terms applied to the surface as a whole; Terms applied to the Margin in particular; Surface Markings and Surface Coverings. For beginners and amateurs this is the best glossary we have yet seen.

IN THE PROCEEDINGS OF THE LINNEAN SOCIETY of New South Wales, 1904, Part 4, November 30th, we find an account of the bacterial origin of Macrozamia Gum, by R. Greig Smith. The author says there can be no doubt that the gum exuded from the plant is produced by a bacterium which he describes and names as Bacillus macrozamiae.

R. GREIG SMITH REPORTS A YELLOW RACE OF BACILLUS PSEUDOARABINUS, Proc. Lin. Soc. N. S. W. 1904, Part 4, Nov. 30, which, though found on the plant next named, has probably nothing to do with the production of the mucilage of the quince. The white and yellow races of Bacillus pseudoarabinus were obtained as such and preserved their respective colors for a year under laboratory conditions.

VERHANDLUNGEN DES BOTANISCHEN VEREINS DER PROVINZ BRANDENBURG, Vol. 46, 1904, contains the following mycological contributions: P. Hennings, Zwei neue Cudonieen aus der Umgebung Berlins [Cudoniella buckowensis P. Henn. n. sp., an abgestorbenen Carexhalmen zwischen Sphagnum; Cudoniella osterwald P. Henn. n. sp., auf feuchten Sandboden zwischen Jungermannia bicuspidata und Algenüberzügen); Phaeosphaerella Marchantiae P. Henn. n. sp. [auf abgetrockneter Marchantia polymorpha]; Otto Jaap, Erster Beitrag zur Pilzflora der Umgegend von Putlitz [list of species].

THE YEARBOOK OF THE UNITED STATES DEPARTMENT OF AGRICULTURE for 1904 (issued in 1905) contains many interesting papers, but one only is mycological, namely, Plant Diseases in 1904, by W. A. Orton — his customary annual list.

A KEY TO THE STIPITATE POLYPORACEAE OF TEMPERATE NORTH AMERICA is given by William A. Murrill in the February and March Nos. of Torreya, 1904. It is carried out to the species — and the usual full diagnoses given serve well for use in identification of specimens. Dr. Murrill's refined genera will be understood by the following which we copy:

Surface of hymenophore covered with reddish-brown varnish..Ganoderma
Surface of hymenophore not as above —
Tubes hexagonal and radially elongated.....Hexagona
Tubes not as above —
Stipe compound .....Grifola
Stipe simple —
Context white —
Plants fleshy, terrestrial .....Scutiger

Plants tough, epixylous —
Pileus inverted, erumpent from lenticels..Porodiscus
Pileus erect, not erumpent —
Context homogeneous, firm.....Polyporus
Context duplex, spongy above, woody below .....Abortiporus
Context brown —
Hymenium concentrically lamelloid.....Cycloporus
Hymenium poroid —
Spores white .....Romellia
Spores brown —
Pileus erect, stipe central.....Coltricia
Pileus inverted, pendent.....Coltriciella

A KEY TO THE PERENNIAL POLYPORACEAE OF TEMPERATE NORTH AMERICA, by William A. Murrill, is published in Torreya. 4: 165-7, November 1904. The genera which are used in the paper, as well as the important characters on which the divisions are made, can best be shown by transcribing the first section of the Key, which is as follows:

Hymenium at first concealed by a valva .....Crytoporus
Hymenium free from the first —
Surface covered with reddish varnish, context corky.....Ganoderma
Surface not covered with reddish varnish, or, if so, context woody —
Context and tubes white or pallid.....Fomes
Context and tubes brown or dark red —
Hymenophore subsessile, caespitose, arising from a common trunk or tubercle .....Globifomes
Hymenophore truly sessile, dimidiate or ungulate, simple or imbricate —
Pileus covered with a horny crust, context punky.. .....Elfvingia
Pileus not covered with a horny crust, or, if encrusted, context woody, ferruginous...Pyropolyporus
Context dark purple or black.....Nigrofomes

PANAEOLUS ACIDUS IS A NEW SPECIES described by D. R. Sumstine in Torreya, 5: 34, Feb. 1904. In general it resembles Psilocybe foenisecii (Pers.) Fr., but is readily distinguished by the black spores. It was growing in a cluster on the bottom of a box in a cellar. The box contained a large bottle of acetic acid which had been broken and the contents emptied on the bottom of the box. The plant grew on this saturated wood.

A LIST OF SEVENTY-SIX SPECIES, THE BOLETACEAE OF PENNSYLVANIA, by D. R. Sumstine, is given in the December No. of Torreya, 1904. This is a remarkably large number, being nearly two-thirds of all the species known in the United States.

THE REPORT OF THE STATE BOTANIST, 1904, CHARLES H. PECK, New York State Museum Bulletin 94 (Botany 8): 1-58 Plates 87-93, P-R, July 1905, is one of the monthly publications of the New York State Education Department (Bulletin 349), but it apparently is a part of the 58th Report if we interpret correctly

the running headline of the plates. For the mycologist the parts specially interesting are the report of several species new to the State Museum; the following species new to science, namely, Boletus atkinsoni, B. nobilis, B. rugosiceps, Clavaria botrytoides, C. xanthosperma, Cortinarius heliotropicus, Lactarius brevis, Lactarius colorascens, Pholiota appendiculata, Hygrophorus laurae decipiens; a popular account of eight or nine edible fungi; and ten colored plates representing fourteen species.

A NEW SPECIES OF LEMBOSIA BY WILLIAM TITUS HORNE, is published in the Bulletin of the Torrey Botanical Club, 32: 69-71, Feb. 1905. It occurs on green stems of Vanilla planifolia Andr. The material was sent by P. H. Rolfs of the U. S. Subtropical Laboratory at Miami, Florida, and the species is named Lembosia rolfsii Horne.

IN BERICHTE DER SCHWEIZERISCHEN BOTANISCHEN GESELLSCHAFT, Heft XIV, 1904, Ed. Fischer publishes his Fortsetzung der Entwicklungsgeschichtlichen Untersuchungen über Rostpilze. Previous installments (10 sections) were published in the same periodical for 1900, 1901 and 1902. Section 11 is entitled Zur Kentniss der Schweizerischen Gymnosporangien, but space is wanting here even to summarize the results. The other sections pertain to the following: 12, Beitrag zur Kentniss der alpinen Weiden-Melampsoreen; and 13, Puccinia orchidearum-digraphidis Kleb.

ROB. STAEGER REPORTS INTERESTING INFECTIONS-VERSUCHE mit Gramineen-bewohnenden Claviceps-Arten in the Botanische Zeitung 1903, Heft VI-VII, p. 111-158. The material used was all collected in Switzerland and the following forms were separated: 1. Claviceps purpurea on Secale cereale and about fifteen other species (including several species of Poa); 2. Claviceps on Glyceria fluitans doubtless identical with Cl. wilsoni Cke.; 3. Claviceps purpurea on Lolium perenne, L. italicum, L. temulentum, L. rigidum, and Bromus erctus; 4. Claviceps purpurea on Poa annua; Claviceps purpurea on Brachypodium silvaticum; and Clacíceps microcephala on Phragmites communis, Nardus stricta, Molinia coerulea, and Aira caespitosa.

W. A. ORTON, IN THE YEARBOOK OF THE UNITED STATES DEPARTMENT OF AGRICULTURE for 1904, published in 1905, continues his annual notes on the occurrence and distribution of Plant Diseases in 1904, this being the sixth installment. Here as elsewhere we may see the influence of the weather conditions upon epidemics of diseases caused by plant parasites, especially (so the author states) in the case of the destructive outbreak of rust in cereals, and the relative absence of downy mildews on account of drought in the Southern and Eastern States. The arrangement of the several diseases in this Report is under the subheads of Pome Fruits; Stone Fruits; Small fruits as Citrus, etc.; Field

and Garden vegetables and Tobacco; Cereals and Forage crops; Fiber Plants; Nuts, Forest trees, and Shade trees; and Greenhouse and Ornamental Plants.

THE TWENTIETH CENTURY OF ELLIS AND EVERHART'S FUNGI COLUMBIANI, issued by E. Bartholomew, appeared Nov. 15, 1904. The genera represented by some four to twenty-seven species each are as follows: Aecidium (4 sp.), Diaporthe (4 sp.), Puccinia (27 sp.), and Uromyces (6 sp.).

AN UNDESCRIBED ALTERNARIA AFFECTING THE APPLE is reported by B. O. Longyear in Science, N. S. 21: 708, May 5, 1905. The fungus was first found in Michigan, later in Colorado. It attacks the blossom end of the fruit, the affected area remaining small or extending over the whole fruit which then becomes a shrivelled dry hard mass. Inoculation experiments are being carried on.

PROFESSOR T. J. BURRILL GAVE THE PRESIDENTIAL ADDRESS before the Buffalo meeting of the American Microscopical Society, Aug. 24, 1904, on Microorganisms of Soil and Human Welfare. The principal sub-heads of the lecture were Rock reducers, Nitrifiers, Root-tubercle Bacteria, and Nitrogen Fixation by Free Bacteria.

IN NOVAE FUNGORUM SPECIES — II, auctoribus H. et P. Sydow (Ann. Mycolog. 3: 185-6, Apr. 1905) three of the eight new species described are American — from Utah. These are as follows: Asteroma garrettianum on Primula, Ascochyta garrettiana on Orthocarpus tolmiei, and Didymaria conferta on Wyethiea amplexicaulis.

A PRELIMINARY REPORT ON THE HYMENIALES OF CONNECTICUT, by Edward Albert White, forms Bulletin No. 3, Connecticut State Geological and Natural History Survey. The annotated list is preceded by popular explanations of the groups and a few keys. The 40 plates are elegant half-tones, printed on heavy plate paper.

PROFESSOR THEOBALD SMITH GAVE AN ADDRESS on Some Problems in the Life History of Pathogenic Microorganisms, before the International Congress of Arts and Science, St. Louis, Mo., Sept. 24, 1904; published in Science, N. S., 20: 817-832, Dec. 16, 1904. He supported the hypothesis of the general phenomenon of infection as follows: That the tendency of all invading micro-organisms in their evolution toward a more highly parasitic state is to act solely on the defensive while securing opportunity for multiplication and escape to another host.

ERNEST S. SALMON'S PAPER ON SPECIALIZATION OF PARASITISM IN THE ERYSIPHACEAE, III. (Ann. Mycolog. 3: 172-184, Apr. 1905) deals with Inoculation-experiments with the asco-

spores of the "biologic form" of Erysiphe graminis DC. on Bromus commutatus, and Inoculation-experiments with conidia of the "biologic form" of E. graminis on wheat. He finds further evidence in support of the view that "biologic forms" are as sharply and distinctively marked off in the ascosporic as in the conidial stage. The second set of experiments showed that the fungus after being kept for five generations on Hordeum silvaticum showed no signs of losing its power of infecting wheat, the original host plant. Strangely enough, the successive generations of the fungus produced on H. silvaticum showed a weaker instead of a stronger power of infecting this host.

In Mycologische Fragmente, LXXVI, Zur Synonymie einiger Pilze, (Ann. Mycolog. 3:189, April 1905) Franz v. Höhnel deals with twenty-four cases of fungi, whose synonomy he gives as based on his investigations. We may refer to a species on Robinia pseudacacia, namely Phleospora robiniae (Libert) v. Höhnel, the synonomy for which he gives as follows: 1837, Ascochyta robiniae Libert; 1849, Septoria robiniae Desm., 1849, Ascochyta robiniae Lasch.; 1854, Septosporium curvatum Rabh.; 1884, Septoria curvata Sacc.; 1891, S. curvata var. diversispora Fau.; and 1902, Fusarium vogelii P. Henn.

Compte Rendus des Seances de l'Academie des Sciences, Paris, tome CXXXVIII, 1904. The mycological articles are as follows: Vancy et Conte, Utilization des Champignons entomophytes pour la destruction des larves d'Altises; Viala et Pacottet, Sur les Verrues des Feuilles de la Vigne; Vuillemin, Nécessité d'instituer un ordre des Siphomycètes; Dangeard, Sur le sité d'instituer un ordre des Siphomycètes et un ordre de Microsiphonées, parallèles à l'ordre des Hyphomycètes; Dangeard, Sur le développement du périthèce des Ascobolées; Viala et Pacottet, Sur la culture du Black Rot; Coupin, Sur l'assimilation des alcools et des aldéhydes par le Sterigmatocystis nigra; De Cordemoy, Sur une fonction spéciale des mycorhizes des racines latérales de la Vanille; Gallaud, De la place systématique des endophytes de la Chidées; Molliard, Mycélium et forme conidienne de la Morille; Dangeard, Sur le developpement du perithèce chez les Ascomycètes; De Istvanffi, Sur la perpetuation du Mildiou de la vigne; Bernard, Le Champignon endophyte des Orchidées; Coupin et Friedel, Sur la biologie du Sterigmatocystis versicolor; Dangeard, Observations sur les Gymnoascées et les Aspergillacées; Vuillemin, Sur les variations spontanées du Sterigmatocystis versicolor.

Compte Rendus des Seances de l'Academie des Sciences, Paris, tome CXXXIX, 1904, contains the following mycological articles: Mme. Z. Galin-Gruzewska, Resistance à la dessication de quelques Champignons; Guilliermond, Recherches sur la germination des spores chez quelques levures; Mlle. M. Stefan-

owska, Sur la loi de variation de poids du Pencillium glaucum en fonction de l'âge; Dauphin, Sur l'appareil reproducteur des Mucorinées; Viala et Pacottet, Sur le développement du Black Rot; Eriksson, Nouvelles recherches sur l'appareil vegetatif de certaines Uredinées; De Cordemoy, Sur les Mycorrhizes des racines laterales des Poiviere.

HYMENOMYCETES NOVI VEL MINUS COGNITI cura Ab. J. Bresadola (Ann. Mycolog. 3: 159-164, April 1905) though referring to European species may here be noted. They are nearly all new and the list is as follows: Tricholoma sulphurescens, Pleurotus rhodophyllus, Volvaria fuscidula, Pluteus murinus, P. diettrichii, Inocybe muricellata, I. similis, I. umbrinella, I. patouillardii, Naucoria flava, Clarkeinda cellaris, Polyporus subtestacens, P. friesii, Trametes nigrescens, Corticium roseocremeum, C. flavescens, C. trigonospermum, Septobasidium hagliettoanum. S. mariani, and S. cavarae.

IN NOTAE MYCOLOGICAE AUCTORE P. A. SACCARDO, Ann. Mycolog. 3: 165-171, April 1905, there are twenty-five new species described, the following being American (Mexican): Orbilia coleosporoides on Didymaea mollis, Septoria hiascens on Arbutus, and Phleospora bonanseana on Schinus mollis. New genera proposed are Orbiliopsis (subg.), and Fioriella.

GEORGE FRANCIS ATKINSON IS THE AUTHOR OF A COLLEGE TEXT-BOOK OF BOTANY, pp. I-XVI, 1-737, published by Henry Holt & Co., New York, 1905. Chapters XIX to XXII inclusive are devoted to the Fungi. A good general account is given of several representatives illustrated by many etchings and half-tones. The final chapter is devoted to the classification of fungi, the genera orders and families being briefly diagnosed, — based on that presented in Engler & Prantl's Pflanzenfamilien.

ANNALES MYCOLOGICI, Vol. III, No. 2, April 1905, contains the following: Maire (Rene), Recherches cytologique sur quelques Ascomycètes; Veuillemin (Paul), Le Spinellus macrocarpus, et ses relations probables avec le Spinellus chalybeus; Bresadola (J.), Hymenomycetes novi vel minus cognoti; Saccordo (P. A.), Notae mycologicae; Salmon (Ernest S.), On Specialization of Parasitism in the Erysiphaceae, III; Sydow (H. et P.), Novae Fungorum species — II; Höhnel (Franz v.), Mycologische Fragmente; Neue Literatur; and Referate und Kritische Besprechungen.

IN NEW WORK UPON WHEAT RUST, Science, N. S., 22: 50-1, 14 July, 1905, Henry L. Bolley states that it will be interesting news to mycologists to know that we have at last definitely established the fact of the wintering of the red spores (uredospores) of a number of the important rusts in viable form, including the important species Puccinia graminis. In some cases Professor

Bolley has been able to germinate as high as eighty to ninety per cent. of all the spores under test — the experiments being carried on with Puccinia graminis exposed to the drying winds of autumn and the intense cold of a North Dakota winter. He found the spores successfully surviving upon dead leaves, dead straw and upon the partially dead or green leaves of living grain or grasses. He further says: "The matter of the barberry stage and other aecidial rusts may yet be proved to be of physiological necessity for the perpetuation of the species, but it would seem that these need no longer be believed to be a direct yearly necessity to the perpetuation of the rusts concerned."

CONCERNING THE IDENTITY OF THE FUNGI CAUSING AN ANTHRACNOSE of the Sweet-pea and the Bitter-rot of the Apple, is the title of an article in Science, N. S. *22*: 51-2, July 14, 1905, by John L. Sheldon, of the West Virginia Agriculaural Experiment Station. This recounts in brief inoculation work by an assistant which will be published in full later. Mr. Sheldon says that he noticed that there was an occasional cell of the mycelium that contained spores, in appearance the same as those borne externally on the hyphae. The article ends with the following paragraph: "It would seem, then, from the results obtained, as if the bitter-rot of the apple, the ripe-rot of the grape, and the anthracnose of the sweet pea are caused by the same fungus. A stage corresponding to the ascigerous stage of the bitter-rot has not been obtained yet in artificial cultures."

HOW MUCH PLANT PATHOLOGY OUGHT A TEACHER OF BOTANY TO KNOW is discussed in the August No. of the Plant World (1905). Some idea of the scope of this paper may be obtained from the principal sub-heads which are as follows: Plants are really living things; Some differences between Plants and Animals; Sources and Causes of Plant Diseases; General Nature of Fungi; Some Facts about Plant Diseases.

IN MEDDELANDEN FRAN STOCKHOLMS HOEGSKOLAS BOTANISKA INSTITUT, Band VI, 1903-4, we find the following mycological articles: G. Lagerheim, Zur Kentniss der Bulgaria globosa (Schmid.) Fr. (Sarcosoma globosum et S. platydiscus Auct.); O. Rosenberg, Ueber die Befruchtung von Plasmopara alpina (Johans.).

AN INTERESTING NOTE IS FOUND IN SCINCE, N. S., 20: 55-6, July 8, 1904, by H. A. Harding and F. C. Stewart, on the Vitality of Pseudomonas campestris (Pam.) Smith on Cabbage Seed. This species forms no spores; and it has been previously found that when fresh boullon cultures were dried at 29° C. on cover slips and kept in darkness an exposure of 45 hours invariably sufficed to destroy the vitality of the organism. The authors of the article have found that P. campestris may live on dry cabbage seed for

at least ten months. Details are to be published later in Bull. No. 251, N. Y. Agr. Exp. Station.

EDWARD BINGHAM COPELAND'S NEW or Interesting California Fungi II, Annales Mycologici, 2:507-510, Nov. 1904, contains the following new species: Omphalia californica, Corprinus bakeri, Polyporus polychromus, Trametes sequoiae, Solenia gracilis, Verpa chicoensis, Helvella faulknerae, and Helvella hegani. The Verpa and Helvellas are illustrated. The diagnoses are in Latin.

REVISED LIST OF INDIANA PLANT RUSTS by J. C. Arthur is published in the Proceedings of the Indiana Academy of Sciences for 1903, separates distributed December 1904. It is given in the latest nomenclature. The purpose is to embody the latest conclusions and reaffirm those remaining unchanged, as well as to correct a few errors and add a few species to the previous lists; now 105 are enumerated, but the unattached aecidia and uredo are not included. Some of the familiar names are changed, *e. g.*, Thecaphora hydrangeae (*Uredo hydrangeae*), Hyalopsora polypodii (*Uredo polypodii*), Aregma (*Phragmidium*), Caeomurus (*Uromyces*), Dicaeoma (*Puccinia*), and Jackya cnici (*Puccinia cirsii-lanceolati*).

LENTODIOPSIS Bubák n. g.— Eine neue Agaricaceen-Gattung aus Böhmen, von Prof. D. Fr. Bubák — is published in Hedwigia, 43:195-6, 16 Mai 1904 — the type species being striking "durch seine parasitische Natur und durch das deutlich entwickelte Velum." This white Agaric occurred on exposed roots of living Fir. Besides the two characters mentioned it is of interest in that "die schmalen weit am Stiele herablaufenden Lamellen an ihrem ende am Stiele zellenförmige Anastomasen bilden." The fungus is said to be nearly related to Lentinus and forms an interesting link between this genus and Morgan's Ohio Lentodium.

THE FOLLOWING TITLES indicate the mycological matter contained in Hedwigia, Band 43, Heft 4, (12 Juni 1904): P. Hennings, Fungi S. Paulenses III. a cl. Puttemans collecti (Schluss); P. Dietel, Kurze Bemerkungen über Triphragmium Ulmariae (Schum.); P. Hennings, Fungi amazonici II. a cl. Ernesto Ule collecti; George Bitter, Zur Soredienbildung; v. Höhnel, Zur Kenntnis einiger Fadenpilze; E. Jahn, Myxomyceten aus Amazonas (Anfang).

IN AN ARTICLE BY H. DIEDICKE in Annales Mycologici, 2-511-4, Nov. 1904, entitled Neue oder seltene Pilze aus Thüringen, we notice many new species whose hosts are common plants, native or introduced, of this country; for example, *Fusicoccum ligustri* Died. n. sp. on Ligustrum vulgare, *Cytospora koelreuteriae* Died. n. sp. and *Microdiplodia koelreuteriae* Died. n. sp. on Koelreuteria paniculata, *Camarosporium juglandis* Died. n. sp. on Juglans

regia, *Myxosporium tulipiferae* Died. n. sp. on Liriodendron tulipifera, and *Cercospora phrygia?*

P. DIETEL IN HIS BEMERKUNGEN UEBER UREDOSPOREN von Uromyces brevipes und Uromyces punctato-striatus, in Annales Mycologici, 2:530-3. No. 1904, states that die Uredosporen von *Uromyces brevipes* (B. et C.) treten in zwei verschiedenen Generation auf, einer primaeren und einer sekundaeren. The former differs from the latter not only in its mode of occurrence but also in the morphological characters of the spores — points not hereto fore recorded. A nearly related form, *Uromyces punctato-striatus* Cke. & Rav. on Rhus diversiloba, California, he adds: Auch bei diesem Pilze kommen primäre und sekundäre Uredosporen vor.

TWO MYCOLOGICAL ARTICLES ARE PUBLISHED IN HEDWIGIA, Band 44, Heft 1, 29 Okt. 1904, as follows: H. Rehm, Beiträge zur Pilzflora von Südamerika XIV; P. Magnus, Einige geschuldete mykologische Mitteilungen.

IN H. REHM'S PAPER, "BEITRAEGE ZUR PILZFLORA VON SUEDAMERIKA XIV," published in Hedwigia, 43:1-15, Taf. 1, 29 Okt. 1904, two new ascomycetous genera are described, as follows: *Trichophyma* Rehm n. g. Myriangiales; *Stictocylpeolum* Rehm n. g. Mollisiaceae.

INDEX TO NORTH AMERICAN MYCOLOGY.

Alphabetical List of Articles, Authors, Subjects, New Species and Hosts, New Names and Synonyms.

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